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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,502

08/21/2006

Paul Nicholls

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01/16/2009

SCHLUMBERGER TECHNOLOGY CORPORATION  
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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT

PAPER NUMBER

2855

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/530,502	NICHOLLS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gail Verbitsky	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-18 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-18 and 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 10, 18, 20-23, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartog et al. (U.S. 5821861) [hereinafter Hartog].

Hartog discloses in Figs. 1-3 a device/ method in the field of applicant's endeavor comprising a

a reactor vessel (inherently having a process) comprising:  
a body (vessel wall and vessel inside)  
a conduit 24 (metal), 26 disposed near (outside or embedded: inside the wall, col. 2, line 6) the body;  
a distributed temperature system for monitoring temperature in the body and comprising an optical fiber 20 positioned in the conduit 24, 26; and  
the conduit and the optical fiber extending such that they provide a temperature profile of temperatures in at least a portion of the body.  
A processor 28 obtains temperature distributed data from the sensor, monitors it (body parameters) and makes/ performing a process (automatic) control by controlling heating element (controlling temperature within an acceptable range).  
Hartog states that installation of the optical fiber could be performed by directing jets of fluid (fluid drag) (col. 1, lines 59-67).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog.

Hartog discloses the device as stated above.

Hartog does not explicitly teach that the metal conduit is a stainless steel conduit.

For claim 4: the use of the particular material, i.e., stainless steel, as stated in claim 4, for the conduit, absent any criticality, is only considered to be the “optimum” material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the conduit disclosed by Hartog since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

Claims 9, 12-15, 17, 24, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog in view in view of Anderson et al. (U.S. 4703174) [hereinafter Anderson] and Mercer (U.S. 2499105).

Hartog discloses the device as stated above.

Hartog does not explicitly teach the limitations of claims 9, 12-15, 17, 24, 26-31.

Anderson teaches that a fiberoptic sensor for sensing both pressure and temperature could be used along with a distillation vessel.

Therefore, it would have been obvious to one of ordinary skill in the art to use the device disclosed by Hartog in the distillation vessel, and use to obtain pressure data

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also, because, according to Anderson it is important to obtain temperature and pressure of the distillation vessel during the distillation process.

With respect to the particular distillation vessel, i.e., having inlet, etc., and also separating liquid components: Although Anderson does not explicitly describe the particular features of the distillation vessel, Mercer, who describes a conventional distillation vessel states that it has a liquid inlet, a vapor outlet, and a process comprising a vapor/ liquid separation stage, known in the standard practice, and inherently, directed to separating liquid components and controlling parameters, and having a plurality of valves. With respect to the particular positioning of the inlet/ outlet: it was held that there would be no invention in shifting the inlet/ outlet disclosed by Mercer to a different position since the operation of the device would not thereby be modified. See In re Japikse, 86 USPQ 70 (CCPA 1950).

Therefore, it would have been obvious to one of ordinary skill in the art to use the device disclosed by Hartog in the distillation vessel, as taught by Anderson and Mercer, because this kind of distillation vessel is known to be a conventional distillation vessel, as already suggested by Mercer.

Claims 11-17, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog in view of Chuang et al. (U.S. 7211702) [hereinafter Chuang] and Camson.

Hartog discloses the device as stated above.

Hartog does not explicitly teach the limitations of claims 11-17, 24, 26-31.

Chuang discloses a device wherein a reactor vessel is a part of a distillation column/ system (having stages) and the temperature and pressure of the vessel is

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controlled by valves and automatic controllers. Chuang controls the process parameters to keep them within acceptable range. The device is concerned with separating of the components.

Therefore, it would have been obvious to one of ordinary skill in the art to use the device of Hartog in a distillation system of Chuang because the parameters of the system of Chuang are also needed to be measured and controlled, as already suggested by Chuang.

With respect to the particular distillation vessel, i.e., having inlet, etc., and also separating liquid components: Although Anderson does not explicitly describe the particular features of the distillation vessel, Gamson, who describes a conventional distillation vessel states that it has a liquid inlet, a vapor outlet, and a process comprising a vapor/ liquid separation stage, known in the standard practice, and inherently, directed to separating liquid components and controlling parameter, and having a plurality of valves. Gamson describes a normal (known in the art) vaporization process in a distillation unit/ vessel, the vessel having a temperature sensor having a vapor outlet and a liquid inlet (with valve), wherein the vapor is removed by the process by means of the outlet and valve 44 to discharge an access of the vapor. Gamson teaches that the distillation process normally comprising a vapor/liquid separation phase. Please note, the particular positioning of the inlet/ outlet, is absent any criticality because it was held that there would be no invention in shifting the inlet/ outlet disclosed by the Prior Art to a different position depending what process is being performed in the

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distillation system, since the operation of the device would not thereby be modified. See In re Japikse, 86 USPQ 70 (CCPA 1950).

Claims 9, 12-15, 17, 24, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog in view in view of Anderson et al. (U.S. 4703174) [hereinafter Anderson] and Gamson (U.S. 3440865).

Hartog discloses the device as stated above.

Hartog does not explicitly teach the limitations of claims 9, 12-17, 24, 26-31.

Anderson teaches that a fiberoptic sensor for sensing pressure and temperature could be used along with a distillation vessel.

Therefore, it would have been obvious to one of ordinary skill in the art to use the device disclosed by Hartog in the distillation vessel, because it is known in the art and admitted by Anderson that the fiber optical temperature/ pressure sensor could be used in the distillation vessel in order to determine/ control its temperature and pressure along the vessel.

With respect to the particular distillation vessel, i.e., having inlet, etc., and also separating liquid components: Although Anderson does not explicitly describe the particular features of the distillation vessel, Gamson, who describes a conventional distillation vessel states that it has a liquid inlet, a vapor outlet, and a process comprising a vapor/ liquid separation stage, known in the standard practice, and inherently, directed to separating liquid components and controlling parameter, and having a plurality of valves. Gamson describes a normal (known in the art) vaporization

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process in a distillation unit/ vessel, the vessel having a temperature sensor having a vapor outlet and a liquid inlet (with valve), wherein the vapor is removed by the process by means of the outlet and valve 44 to discharge an access of the vapor. Gamson teaches that the distillation process normally comprising a vapor/liquid separation phase. Please note, the particular positioning of the inlet/ outlet, is absent any criticality because it was held that there would be no invention in shifting the inlet/ outlet disclosed by Gamson to a different position since the operation of the device would not thereby be modified. See In re Japikse, 86 USPQ 70 (CCPA 1950).

Therefore, it would have been obvious to one of ordinary skill in the art to use the device disclosed by Hartog in the distillation vessel, as taught by Anderson and Gamson, because this kind of distillation vessel is known to be a conventional distillation vessel, as already suggested by Gamson.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-7, 8-18, 20-31 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571/ 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Gail Verbitsky*  
*Primary Patent Examiner, TC 2800*

December 29, 2008

/Gail Verbitsky/  
Primary Examiner, Art Unit 2855